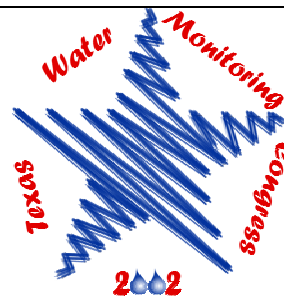


# The 2002 Texas Water Monitoring Congress Summary



## Introduction

Because water is a continuing critical resource in Texas affecting the public, environment, and economy of Texas, The Texas Water Monitoring Council (TWMC) sponsored the Fourth Texas Water Monitoring Congress on September 9-11, 2002 at the University of Texas at Austin, J.J. Pickle Research Campus, Commons Center. Approximately 250 individuals representing 83 organizations attended the Congress.

The purpose of the 2002 Congress was to offer participants opportunities to discuss issues, network with colleagues, share successes, and bring new ideas back to their own programs. The conference agenda included plenary presentations and focus group discussions. This was a working conference to provide a forum for effective communication, cooperation, and collaboration among individuals and organizations involved in water monitoring in Texas.

The keynote speaker for the Congress was Mr. Robert Cook, Executive Director of the Texas Parks and Wildlife Department (TPWD). Mr. Cook discussed the function of the TPWD and goals related to its function. The Texas Parks and Wildlife Commission approved a plan that analyzes the State's existing and future land and water conservation and recreation needs; identifies threatened land and water resources in this state; and establishes the relative importance of conserving particular resources listed in the inventory.

This year the Texas Water Monitoring Council solicited papers for the plenary session. The papers selected for the Congress and the presentations covered surface water monitoring, data management, GIS applications, and other topics of general interest. The summaries of the Plenary Session talks are listed below and the presentations and papers are posted on the TWMC website. Detailed reports from the six focus groups are included in the 2002 Texas Water Monitoring Congress Proceedings. This report is available on the Internet at the address listed in the contact information.

## Focus Groups

The core of the Congress was six focus groups that convened in breakout sessions to discuss Data Administration, Quality Assurance/Quality Control, Public Outreach, Technology and Technological Solutions, Ground-water Issues, and GIS Applications and Solutions.

Each group reviewed the recommendations made by the 2000 Congress, assessed progress, and developed recommendations for current and future goals and actions. On the last day, the six focus groups presented the results from their focus group to the entire Congress.

## Focus Group Recommendations from the 2002 Texas Water Monitoring Congress

### Data Administration

- Identify a minimum set of required elements.
- Identify categories and adopt metadata standards for categories.
- Establish a committee to implement recommendations.

### GIS Applications and Solutions

- Improve broadband Internet access throughout the state.
- Promote GIS initiatives and applications throughout the state.
- Support sharing of GIS data at no cost or cost-recovery.
- Support GIS education for staff.
- Demonstrate analytical capabilities of GIS to decision-makers and stakeholders.
- Support web based data sharing applications.

### Ground-water Monitoring Issues

- Improve well inventory and well reporting.
- Educate ground-water districts and public on the value of collecting good ground-water data.
- Develop a basic set of data elements for ground-water data collection.
- Increase water level data collection in major and minor aquifers.

### Public Outreach

- Promote use of volunteer data, implement effective tools to measure success, and increase cooperation among existing programs.
- Develop a program to provide information to the public through the Internet.
- Educate the private sector to encourage participation and understand benefits of compliance.

### Quality Assurance/Quality Control

- Set up local program needs to address the issue of making data available quickly and determine interpretation methods for the public.
- Incorporate activities to assess data sets to standard methods and make data more useful.
- Write a quality assurance manual and expand quality control and documentation for the collection of biological samples.
- Standard operating procedures for biological sampling need to address equipment standardization.

### Technology and Technological Solutions

- Encourage the use of Doppler technologies when possible to measure flow.
- Continuous monitoring is best accomplished through partnerships with specific monitoring objectives and quality assurance.
- Water resource professionals need to keep up with emerging technologies and develop a network to share these technologies.

## Plenary Session Summaries Day One

Glenn C. Clingenpeel, of the Trinity River Authority of Texas discussed the coordinated surface-water quality monitoring efforts in the Trinity River Basin. He discussed the monitoring program that is in place and the key components for its success.

Kenneth E. Banks from the City of Denton discussed the city's Watershed Protection Program implemented to characterize trends of selected water quality parameters. Data collected in these monitoring efforts are used to target areas of greatest water quality concern and to show the status of the City's surface waters.

R. Daren Harmel with the USDA-ARS Grassland Soil and Water Research Laboratory in Temple, Texas presented research on Developing Automated Storm Water Sampling Strategies for Small Watersheds. He discussed the exploration and benefits of several sampling strategy components including minimum flow thresholds, time- and flow-weighted sampling, and discrete and composite sample collection.

Dr. Paul Jensen of PBS&J presented the Congress with the results of monitoring in 2001 of the City of Houston's Bayous. The focus of this monitoring effort was to study the dynamics of Escherichia coli (EC) levels. Results from this study will support stakeholder efforts to identify the sources of bacteria and practical corrective actions in the Houston area.

David Cowan and Rich Winkelbauer of the Lower Colorado River Authority (LCRA) presented information on the LCRA's Colorado River Basin Water Quality and Quantity website. They presented how the data are available through an ArcIMS interface.

Angela Masloff of the Texas Water Development Board described the Texas Regional Water Planning Database. Originally, created in Excel worksheets, it was migrated into a multi-user relational database management system. She described the current work to implement a web-based database system that will allow the planning regions to create reports for inclusion in their water management plans in 2006.

Teresa Howard and Gordon Wells of the Center for Space Research at the University of Texas at Austin discussed remote sensing products that are applicable to water monitoring. They discussed various types of products and gave examples of remote sensing used for water monitoring using the multiple sensors for applications in drought monitoring, flood hazard mapping, and other water monitoring applications.

## Plenary Session Summaries Day Two

Dr. Raghavan Srinivasan, Director of Spatial Sciences Laboratory at Texas A&M University discussed the development of a soil moisture index by integrating GIS and remote sensing technologies with the advanced distributed parameter hydrologic model SWAT (Soil and Water Assessment Tool). Preliminary analysis of the results show that the developed drought index compares well with the currently used Palmer Drought Severity Index and has a finer resolution to find drought affected areas.

Beckie J. Morris and Gail McGlamery of the Barton Springs/Edwards Aquifer Conservation District discussed the Aquifer Watch volunteer monitoring program that is sponsored by the district. This program focuses on using volunteers to monitor ground-water quality in Texas.

Greg Rogers of the Texas Commission on Environmental Quality presented an overview of the Texas Source Water Assessment Project required by 1996 Safe Drinking Water Act amendments. The initiative requires utilizing all available databases including statewide water quality data sets of any of the 227 drinking water contaminants. The program consists of the collection and analysis of components to create the source-water assessment.

Patrick Roques, Co-Chair of the Council recapped the plenary and focus group sessions to the entire Congress. He then closed the 2002 Congress.

## The Texas Water Monitoring Council

### Statement of Purpose:

The Texas Water Monitoring Council is a broad-based collaborative body formed to help achieve effective and efficient collection, interpretation, and dissemination of basic data and processed information for use in addressing issues, policies, and management of Texas Waters. TWMC operates through consensus building among its members and addresses the full range of water resources, physical, chemical, and biological, including ground- and surface- waters, in freshwater and estuarine environments.

### Texas Water Monitoring Council Members:

Brazos River Authority  
Lower Colorado River Authority  
Sabine River Authority  
Texas Alliance of Groundwater Districts  
Texas Commission on Environmental Quality  
Texas Parks and Wildlife Department  
Texas Watch - Southwest Texas State University  
Texas Water Development Board  
Texas Water Foundation  
Texas Water Resources Institute  
United States Army Corps of Engineers  
United States Geological Survey

### 2004 Texas Water Monitoring Congress

If you wish to receive information on the 2004 Congress when it becomes available please contact the Executive Secretary of the TWMC

## Further Information

Information about the Council or 2002 Texas Water Monitoring Congress, including the Proceedings can be found at [www.TxWMC.org](http://www.TxWMC.org). or contact the

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